

Application No. 09/979,572
Amendment dated October 25, 2005
Amendment in response to Office Action dated July 12, 2005

REMARKS AND ARGUMENTS

Status of Application

Claims 1-74 are pending in the present application. Claims 44-74 have been cancelled without prejudice. By way of this response, new claims 75 and 76 are added.

Objection to the Specification

The specification is objected to by the Examiner because the title of the invention is not descriptive. In response, Applicants have amended the title which is believed to more clearly indicate the claimed invention. Applicants therefore respectfully request withdrawal of the objection to the specification.

Rejection under 35 USC §112

Claims 32-43 are rejected under 35 USC § 112, second paragraph for lacking sufficient antecedent basis because claim 1 is an apparatus claim while claims 32-43 recite method claims. In response, Applicants have amended claim 32 to be dependent on claim 31 instead of claim 1. Claim 31 recites a method claim and since claims 32-43 are directly or indirectly dependent on claim 31, Applicants submit that this basis of rejection has been traversed and request its withdrawal.

Rejection under 35 USC §102(b)

Claims 1-24, 27-32 and 34-43 are rejected under 35 USC § 102(b) as being anticipated by US Patent No.: 4,516,203 (Faber et al.). Applicants respectfully disagree.

Claim 1 recites a processor which includes immediate instructions having immediate data in the instructions' operand field. The processor includes a data table for storing the immediate data in an order determined by a flow analysis. During execution, when an instruction pointed to by the program counter is fetched, it is decoded by an instruction decoder. If the decoded instruction is an

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immediate instruction, immediate data from the data table is provided. The use of a data table enables the immediate data to be separated from the instruction stream. Similarly, claim 31 recites a method of separating immediate data from the instruction stream comprising performing a flow analysis on a program to identify immediate data and storing the immediate data in a data table in an order determined by the flow analysis.

Faber et al. describes a data processing system for encaching data whose value does not change during execution of an instruction sequence. It appears from the Office Action that the Examiner has equated the cache, data stored in the cache and pointers and instructions of Faber et al. to the data table, immediate data and immediate instructions of the claim 1. Applicants submit that these elements of Faber are not the same or equivalent to those presently claimed. Even if they were, Applicants still submit that this would fail to teach or suggest the invention as recited in claim 1 or 32. For example, Faber et al. nowhere teaches or suggests the use of a flow analysis to determine the order that immediate data is stored in a data table. Therefore Applicants submit that claims 1 and 32 are patentable over Faber et al. Since claims 2-30 and 32-43 are directly or indirectly dependent on claim 1 or 31, these claims are also patentable over Faber et al.

Rejection under 35 USC §103(a)

Claims 26-30 and 33-43 are rejected under 35 USC § 103(a) as being unpatentable over Faber et al., as applied to claims 1 and 32 respectively, in view of "Static Analysis of Program Source Code using EDSA" (Vanek et al.). Applicants respectfully disagree.

Vanek et al. discloses the use of static analysis of a program source code using EDSA for debugging purposes. Faber et al., on the other hand, describes a data processing system which includes a cache for storing data whose value does not change during normal execution. Since Vanek et al. relates to debugging while Faber et al. relates to normal operation of the processing system, Applicants submit that there is no suggestion to combine these references. Even if there were a suggestion to combine these references, such a combination would still fail to teach or suggest the

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invention as claimed. As already discussed, Faber et al. fails to teach the use of a flow analysis to determine the order that immediate data is stored in the data table. Vanek et al. is only concerned with the use of flow analysis for debugging purposes. For example, Vanek et al. describes that the knowledge gained can be for the purpose of tracking down a bug or to determine in advance whether an intended change will have undesirable side effects. See Vanek et al., Background and Overview section. It nowhere teaches or suggests the use the flow analysis to identify immediate data and to determine the order in which they are stored in a data table. Applicants therefore submit that claims 1-43 are patentable over Faber et al. and Vanek et al., alone or in combination.

Objection to the Claims

Claim 25 is objected to as being dependent on a rejected base claim. The Examiner has indicated that claim 25 would be allowable if rewritten in independent form which includes all of the limitations of the base claim and any intervening claims. Applicants have added new claim 75 which essentially contains all limitations of claim 25, its base claim and any intervening claims. Additionally, Applicants have added new claim 76 which include the specific elements cited by the Examiner as the reason for allowance. Applicants therefore submit that new claims 75 and 76 are patentable over Faber et al. and Vanek et al., alone or in combination.

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Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance and the issuance of a formal Notice of Allowance at an early date is respectfully requested.

Should the Examiner believe that a telephone conference would expedite prosecution of this application, please telephone the undersigned attorney at his number set out below.

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Respectfully submitted,



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